

A NEW SPECIES OF IDIOGRAMMA FOERSTER WITH NOTES ON TWO OTHER SPECIES

(Hymenoptera: Ichneumonidae)

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In the course of a study of a new species of *Xyela* on Coulter Pine, *Pinus coulteri*, one mile east of Mount Hamilton, Santa Clara County, California, a new species of *Idiogramma* was collected. This new species keys out to *I. fraternus* Townes and Townes (Townes and Townes, 1951) but may be distinguished by the length of the forewing (greater than 3.5 mm. as opposed to less than 3.5 mm.) and the ratio of the ovipositor length to that of the forewing (1.4 versus 1.0). The difference in the length of the forewing is greater when like sexes are compared. The forewings of the males of *I. fraternus* measure 2.7–3.0 mm. while the forewings of the new species range from 3.7–4.0 mm. (males) and vary from 4.5–5.0 mm. (females).

Idiogramma titana Burdick, new species

Female: Mandible a little narrower at base of teeth than at middle, teeth weakly divergent and distinctly recurved; frons not yellow laterally; a faint longitudinal impression extending between the posterior ocelli to back of head; occipital carina interrupted medially; forewing 4.5–5.0 mm. Color: ground color black; face to upper edge of antennal sockets, clypeus, mouthparts, except teeth of mandible, lower 0.2 of temple, underside of scape and pedicel, tegula, hind corner of pronotum, fore coxae, trochanters, fore and middle femora, fore and middle tibiae, short thin band at apex of first tergite, and a narrow apical band on the second and following tergites (interrupted laterally) pale yellow; tarsi brownish.

Male: Like female except venter of abdomen yellow and forewing 3.7–4.0 mm. long.

Holotype female, 1 MILE EAST OF MOUNT HAMILTON, SANTA CLARA COUNTY, CALIFORNIA, May 25, 1956 (D. Burdick) associated with *Pinus coulteri*. The allotype and the four paratypes have the same data as the holotype. The holotype and allotype are deposited in the U.S.N.M. One pair of the paratypes has been placed in the California Insect Survey, the remaining pair has been presented to H. K. Townes.

The most striking feature of this new species is its size, which is about twice that of any of the known species. The size may be

correlated with that of the suspected host, an undescribed species of *Xyela*, which is twice as large as any known *Xyela*, and is the only one living on Coulter Pine at the Mt. Hamilton locality. This genus of ichneumonids has been associated with *Xyela* since R. A. Cushman (1937) found that the ovarian eggs of the wasp were identical to those found on the *Xyela* larvae. Also, the adult parasites are known only from the vicinity of pines during the period of the growth of the staminate cones. The *Xyela* larvae feed within these cones and drop to the ground shortly after the cones open to release the pollen.

From the same locality, four males of *I. fraternus*, but no females, were collected from Coulter Pine. The females may be associated with the Digger Pine, *Pinus sabiniana* which was shedding pollen on this date (May 21, 1956) while the Coulter Pine did not start shedding pollen for another two or three weeks. This supposition is supported by a correlation of the distribution of *I. fraternus* with *Xyela minor* Norton and *X. bakeri* Konow. These two species range from east to west on a number of species of pines including Lodgepole Pine, *P. contorta*, and Ponderosa Pine, *P. ponderosa*, which are the pines from which *I. fraternus* was collected by Townes and Townes (1951).

I. contortae Townes and Townes was collected from Bishop Pine, *Pinus muricata*, four miles west of Plantation, Sonoma County, California, on April 21, 1957. This wasp has been taken from Lodgepole and Ponderosa Pine (Loc. cit.), and its presence on Bishop Pine is probably due to the similar time of staminate cone development (hence, similar time of *Xyela* larval emergence time) of Lodgepole and Bishop Pine along the Pacific coast. There is apparently no host specificity as the *Xyela* species found on Bishop Pine are different from those on Lodgepole Pine.

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